

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

UNITED STATES OF AMERICA,

Plaintiff,

v.

No. 23-cr-01620-KWR

JOSHUA GONZALES,

Defendant.

**ORDER AND OPINION DENYING DEFENDANT’S MOTIONS TO EXCLUDE
EXPERT WITNESSES**

THIS MATTER comes before the Court on Defendant’s motions to exclude expert witnesses and testimony, Docs. 79, 96, 115. Defendant objects to the testimony of four of the United States’s proposed expert witnesses: Special Agent Sean Macmanus (CAST expert); Forensic Examiner Jerrilyn Conway (DNA expert); Forensic Examiner Shannon Prince (fingerprints expert); and Forensic Examiner Brian McVicker (footprints expert). Docs. 79, 96.¹ The Court held *Daubert* hearings on May 27 and 28, 2025. *See* Doc. 185 (May 27 hearing transcript); Doc. 186 (May 28 hearing transcript). After considering the testimony elicited at the *Daubert* hearing and the applicable law, the Court finds that Defendant’s arguments are not well-taken, and therefore, the motions are **DENIED**.² The Court notes that it only rules on Defendant’s

¹ Defendant also objected to the expert testimony of Forensic Examiner Karen K. Lowe. *See* Doc. 115. But the United States has since represented that it no longer plans to call Lowe as a witness at trial. *See* Doc. 181 (United States’s Second Amended Witness List). Accordingly, Defendant’s objection to Karen Lowe’s testimony, Doc. 115, is **DENIED AS MOOT**. Defendant also noted that it does not object to Dr. Ian Paul’s expert testimony and that including the United States’s notice, Doc. 62, in its omnibus objection, Doc. 96, was a typo.

² Defendant objected to the United States’s expert notices under Federal Rule of Criminal Procedure 16, arguing that the notices were deficient. *See* Doc. 79; Doc. 96 at 1–4. Defendant has since stated that the *Daubert* hearing cured its notice objections as to Forensic Examiner Jerrilyn Conway, Forensic Examiner Shannon Prince, and Forensic Examiner Brian McVicker. Doc. 186,

specific objections to the expert testimony and reserves its ruling on admitting the testimony until trial.³

BACKGROUND

I. Special Agent Sean Macmanus

FBI Special Agent Sean Macmanus is a member of the FBI Cellular Analysis Survey Team (“CAST”). Doc. 72 at 1. Macmanus “specializes in the analysis of historical call detail records, cell site records, historical cell site analysis, and Google Location History records, including Google ‘geofences.’” Doc. 72 at 1. In its notice, the United States stated that Macmanus would testify to and offer opinions about:

(a) the manner in which cellular communications are sent through telecommunication networks and the manner in which the companies obtain and record approximate device locations; (b) the operation and location of cell phone towers and his analysis of the call detail records and cell site data collected in this case¹ including how call detail records identify which cell tower had the best signal at the time a cellular communication event occurred and how that particular tower will provide the approximate location of the cell phone at the time the record was generated; (c) Google Location History records and the manner in which Google obtains and records device locations; (d) the manner in which Location History Records are obtained using a Google Geofence search; and (e) opinions about the general areas in which mobile phones were located on certain dates and times, as displayed in his expert report which has been peer reviewed.

Doc. 72 at 2. The United States attached to the notice a copy of Macmanus’s expert report. Doc. 72-2.

114:23–115:11. As a result, the Court only analyzes Defendant’s deficient notice objection to the United States’s notice for Special Agent Sean Macmanus. Doc. 79.

³ The Court’s gatekeeping function requires it to make explicit findings only on specific objections raised by the parties. *See United States v. Avitia-Guillen*, 680 F.3d 1253, 1259 (10th Cir. 2012) (“When a party fails to object to an expert’s methodology, the district court need not make explicit findings.”).

II. Forensic Examiner Jerrilyn Conway

Jerrilyn Conway is a forensic examiner and legal-program manager for the FBI Laboratory's DNA Casework Unit. Doc. 63 at 1. Conway will educate the jury about DNA and serology and the methods and procedures she uses to test and compare DNA and serology samples. Doc. 63 at 2. Conway will testify consistent with the superseding Laboratory Report she authored in this case and how she reached the conclusions therein. Doc. 63 at 2; Doc. 186, Exs. 1–4 (lab report exhibits). The Lab Report “details how the FBI received [19] case-related items which were then selectively subjected to serological testing and DNA analysis using short tandem repeats (STRs).” Doc. 63 at 2–3.

At issue in this motion are Conway's analyses of Items 50 (two right hand fingernail swabs from Buck Romero), 53 (left hand fingernail clippings from Defendant), 54 (right hand fingernail clippings from Defendant), 56 (left hand fingernail swab from Defendant), and 57 (right hand fingernail swab from Defendant). Doc. 63 at 2–3. The United States's expert notice and Conway's testimony at the *Daubert* hearing summarize her findings:

- Item 50: Blood was identified. The item was interpreted as originating from two individuals, but no DNA typing results other than Buck Romero were identified. Defendant was excluded from the sample as a potential contributor. Doc. 186, 27:5–27:19; Ex. 1 at 4.
- Item 53: No blood was detected. Male DNA was present. No DNA typing results other than Defendant were obtained from the sample. Doc. 63 at 4.
- Item 54: Indicated presumptive blood. Male DNA was obtained. The item was interpreted as originating from two individuals, one of whom was Defendant. The other contributor was not identified. Doc. 63 at 4.
- Item 56: No blood was detected. Male DNA was obtained. The item was interpreted as originating from two individuals, one of whom was Defendant. Doc. 63 at 4–5. Conway testified that she has “very limited information about the second contributor”; that it is “twelve times more likely if Gonzales and Buck Romero are contributors, rather than if Gonzales and an unknown individual are contributors[,]” which “provides limited support for the inclusion of Buck Romero to that sample; and the results are “73 times more likely if Gonzales and Antonio Romero are contributors, rather than if Gonzales and an

unknown individual are contributors[,]” which “provides also limited support for the inconclusion of Antonio Romero to that sample.” Doc. 186, 28:20–30–4.

- Item 57: No blood was detected. Male DNA was obtained. The item was interpreted as originating from two individuals, one of whom was Defendant. The DNA results are 57 times more likely that Gonzales and either Buck or Antonio were contributors than if Defendant and an unknown person are contributors. Conway concluded that there is limited support for inclusion that either one of the victims are secondary contributors to the DNA on the item. Doc. 63 at 5.

In sum, the item retrieved from Buck Romero (the victim) did not include Defendant as a contributor, and the items retrieved from Defendant did not include (beyond a low likelihood) either victim as a contributor.

III. Forensic Examiner Shannon Prince

Shannon Prince is a forensic examiner in the FBI Lab’s Latent Print Operations. Doc. 66 at 1. Prince examined several items of evidence in relation to this case. Doc. 66 at 1–2. She analyzes evidence using the “Analysis, Comparison, and Evaluation (ACE) methodology[,], which includes an assessment of the quantity and quality of the information present.” Doc. 66 at 2. “A print is deemed suitable for comparison when sufficient reliable information may be present such that an identification decision could be reached.” Doc. 66 at 2. In this case, Prince analyzed the items and concluded that “no prints were . . . suitable for comparison.” Doc. 66 at 3.

IV. Forensic Examiner Brian McVicker

Brian McVicker is a forensic examiner in the FBI Lab’s Questioned Documents Unit’s Footwear and Tire Group. Doc. 61 at 1. McVicker received digital images of the crime scene, including footwear impressions around the chicken-wire where the bodies were recovered; footwear from the victims’ bodies (Items 44 and 45 (Doe #1 shoes); Items 77 and 78 (Doe #2 shoes)); and Defendant’s shoes (Items 59 and 60) recovered six days after the killings occurred.

Doc. 61 at 1–2. McVicker will testify to his examination process and observations. Doc. 61 at 3; *see infra* section II.D. McVicker will testify that, based on his examinations, he determined that, because “there is limited detail and clarity retained in the footwear impressions on the scene, no determination could be reached as to whether either [Items 59 or 60] could or could not have made [the] impressions.” Doc. 61 at 3–8. He will further testify that “[t]he photographed footwear impressions do not correspond in outsole design with [Items 44, 45, 77, and 78],” and that “these [Items] were excluded as the source of [the] impressions.” Doc. 61 at 8–10.

DISCUSSION

I. Legal Standard

A. Expert Notice

A proponent of an expert witness must disclose to the opposing party, among other things, a “complete statement of all opinions that the government will elicit from the witness in its case-in-chief . . . or during its rebuttal to counter testimony that the defendant has timely disclosed” and “the bases and reasons for [the opinions].” Fed. R. Crim. P. 16(a)(1)(G)(iii).⁴ If the government does not provide all the required information, “[t]he government must supplement or correct its disclosures.” *See* Fed. R. Crim. P. 16(a)(1)(G)(vi).

B. Federal Rule of Evidence 702

“The trial judge has broad discretion concerning the admission or exclusion of expert testimony.” *United States v. McDonald*, 933 F.2d 1519, 1522 (10th Cir. 1991). “The proponent of

⁴ The Rule also requires the proponent to provide “the witness’s qualifications, including a list of all publications authored in the previous 10 years” and “a list of all other cases in which, during the previous 4 years, the witness has testified as an expert at trial or by deposition.” Fed. R. Crim. P. Fed. R. Crim. P. 16(a)(1)(G)(iii). These requirements are not at issue.

expert testimony bears the burden of establishing that the proposed testimony is admissible.” *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (en banc) (citation omitted). “A witness who is qualified as an expert by knowledge, skill, experience, training, or education, may testify in the form of an opinion or otherwise” if:

(a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert’s opinion reflects a reliable application of the principles and methods to the facts of the case.

Fed. R. Evid. 702. “Under Rule 702, a district court must satisfy itself that the proposed expert testimony is both reliable and relevant, in that it will assist the trier of fact, before permitting a jury to assess such testimony.” *United States v. Rodriguez-Felix*, 450 F.3d 1117, 1122–23 (10th Cir. 2006) (citing Fed. R. Evid. 702). “The inquiry under Rule 702 is a ‘flexible one.’” *United States v. Vargas*, 471 F.3d 255, 261 (1st Cir. 2006) (citing *Daubert v. Merrell Dow Pharms., Inc.*, 509 U.S. 579, 594 (1993)). “The trial court enjoys broad latitude in executing its gate-keeping function; there is no particular procedure it is required to follow.” *Id.*

Relevance. The Court must first determine whether the expert testimony is relevant. *See United States v. Rice*, 52 F.3d 843, 847 (10th Cir. 1995) (“[U]nder Rule 702, the inquiry of whether expert testimony will assist the trier of fact is essentially a question of relevance.” (citing *Daubert*, 509 U.S. at 579)). “[T]he touchstone of admissibility under Rule 702 is helpfulness to the trier of fact.” *Werth v. Makita Elec. Works, Ltd.*, 950 F.2d 643, 648 (10th Cir. 1991). To determine whether the testimony will assist the jury, the court considers several (non-exclusive) factors including “(1) whether the testimony is relevant[,] (2) whether it is within the juror’s common knowledge and experience[,] and (3) whether it will usurp the juror’s role of evaluating a witness’s credibility.” *Rodriguez-Felix*, 450 F.3d at 1123 (citations omitted); *see also McDonald*, 933 F.2d at 1522 (“Rule

702 . . . dictates a common-sense inquiry of whether a juror would be able to understand the evidence without specialized knowledge concerning the subject.”); Notes of Advisory Comm. on Proposed Rules, Fed. R. Evid. 702 (“There is no more certain test for determining when experts may be used than the common sense inquiry whether the untrained layman would be qualified to determine intelligently and to the best possible degree the particular issue without enlightenment from those having a specialized understanding of the subject involved in the dispute.”) (quoting Mason Ladd, *Expert Testimony*, 5 Vand. L. Rev. 414, 418 (1952)).

Evidence is relevant if “(a) it has any tendency to make a fact more or less probable than it would be without the evidence” and (b) the fact is of consequence in determining the action.” Fed. R. Evid. 401. “The threshold for relevance under the Federal Rules of Evidence is not a high one, . . . requiring sufficient materiality and probative value to ‘provide a fact-finder with a basis for making some inference, or chain of inferences’” *United States v. Medina-Copete*, 757 F.3d 1092, 1105–06 (10th Cir. 2014) (internal citations omitted).

Reliability. The Court has a “gatekeep[ing] obligation to ‘ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.’” *Dodge v. Cotter Corp.*, 328 F.3d 1212, 1221 (10th Cir. 2003) (citing *Daubert*, 509 U.S. at 589); *see also Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 141, 147 (1999) (holding that a district court’s “basic gatekeeping obligation . . . applies to all expert testimony”).

This gatekeeping function involves a two-step analysis. Courts must first determine whether the witness is qualified as an expert. *See United States v. Foust*, 989 F.3d 842, 845 (10th Cir. 2021). To qualify as an expert, the witness must possess such “knowledge, skill, experience, training, or education in [a] particular field as to make it appear that [the] opinion would rest on substantial foundation and would tend to aid the trier of fact in his search for truth.” *LifeWise*

Master Funding v. Telebank, 374 F.3d 917, 928 (10th Cir. 2004) (citing *Graham v. Wyeth Labs.*, 906 F.2d 1399, 1408 (10th Cir. 1990)). “It is not required that experts be ‘blue-ribbon practitioners’ with optimal qualifications.” *Vargas*, 471 F.3d at 262.

Second, if the witness is qualified, the Court must determine whether the expert’s opinions are reliable. *See Foust*, 989 F.3d at 845; *Nacchio*, 555 F.3d at 1241. “This . . . requires the judge to assess the reasoning and methodology underlying the expert’s opinion, and [to] determine whether it is both scientifically valid and applicable to a particular set of facts.” *Dodge*, 328 F.3d at 1221.

To make this determination, the Supreme Court has identified five factors: “(1) whether the theory can be tested; (2) whether it is subject to peer review and publication; (3) the known or potential error rate; (4) the existence and maintenance of standards; and (5) the general acceptance in the relevant scientific community.” *Id.* (citing *Daubert*, 509 U.S. at 593–94). “However, this list is not exclusive, and the test for reliability is flexible.” *Id.* (citing *Kumho Tire*, 526 U.S. at 150); *see also Nacchio*, 555 F.3d at 1241 (“Reliability questions may concern the expert’s data, method, or his application of the method to the data.”). “[W]hether *Daubert*’s specific factors are, or are not, reasonable measures of reliability in a particular case is a matter that the law grants the trial judge broad latitude to determine.” *Kumho Tire*, 526 U.S. at 153. “The purpose of the *Daubert* gatekeeping function is not to measure every expert by an inflexible set of criteria but to undertake whatever inquiry is necessary ‘to make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.’” *Smith v. Ingersoll-Rand Co.*, 214 F.3d 1235, 1243 (10th Cir. 2000) (quoting *Kumho Tire*, 526 U.S. at 152). While “an expert’s conclusions are not immune from scrutiny,” a “district court should focus on an expert’s

methodology rather than the conclusions it generates.” *Dodge*, 328 F.3d at 1222 (citing *Daubert*, 509 U.S. at 595).

II. Analysis

A. Special Agent Sean Macmanus

Special Agent Sean Macmanus is the United States’s CAST expert. Defendant argues that his testimony should be excluded from trial because the United States’s expert notice, Doc. 72, does not comply with Federal Rule of Criminal Procedure 16 by not “set[ting] out a complete statement of all opinions that the government will elicit from the witness in its case-in-chief and the bases and reasons for those opinions.” Doc. 79 at 5–9. These omissions, Defendant argues, caused him to be unable to assess whether Macmanus’s expert testimony is relevant and reliable. *Id.* The Court concludes that the United States’s expert notice is not deficient, and even if it was deficient, excluding Macmanus’s testimony is not a proper remedy under the circumstances.⁵

The United States’s expert notice, Doc. 72, was not deficient under Federal Rule of Criminal Procedure 16. The notice and attached expert report set out a complete list of opinions that Macmanus would offer. Doc. 72 at 2; Doc. 72-2 at 10–21. The expert report also set out the “bases and reasons for [the opinions],” explaining the methodology used by Macmanus when he analyzed the cell-site data. Doc. 72-2 at 2–7. The succinct (and arguably conclusory) summary of the methodology Macmanus used matches the relative simplicity of the data analysis. *See* Doc.

⁵ Defendant’s only objection to the inclusion of Macmanus’s testimony is deficient notice under Federal Rule of Criminal Procedure 16; Defendant raises no specific objections to the content of Macmanus’s expert testimony under Federal Rule of Evidence 702. *See* Doc. 79; Doc. 186, 117:24–120:1. While Defendant argues at length that the notice rendered him unable to assess the relevance or reliability of Macmanus’s testimony under Rule 702, Doc. 79, Defendant never made the argument (or requested additional time to argue) that his testimony is irrelevant or unreliable at either hearing, Docs. 185, 186, or in any motion.

185, 39:10–52:25. In other words, once Defendant gained access to the underlying cell-site data and Google records, the methodology provided for in the report could explain the diagrams Macmanus generated.

Even if the United States’s expert notice was deficient, excluding Macmanus’s expert testimony is an improper remedy. *See United States v. Charley*, 189 F.3d 1251, 1262 (10th Cir. 1999) (“[E]xclusion of [a witness’s] expert testimony . . . is almost never imposed ‘in the absence of a constitutional violation or statutory authority for such exclusion.’” (citing *United States v. Gonzales*, 164 F.3d 1285, 1292 (10th Cir. 1999))). If the government fails to comply with Rule 16, a district court may “(A) order that party to permit the discovery or inspection; specify its time, place, and manner; and prescribe other just terms and conditions; (B) grant a continuance; (C) prohibit [the government] from introducing the undisclosed evidence; or (D) enter any other order that is just under the circumstances.” Fed. R. Crim. P. 16(d)(2).

To determine whether (and which) Rule 16 sanctions are appropriate, district courts must consider: “(1) the reason for the delay, including whether the non-compliant party acted in bad faith; (2) the extent of prejudice to the party that sought the disclosure; and (3) the ‘feasibility of curing the prejudice with a continuance.’” *United States v. Walker*, 85 F.4th 973, 985 (10th Cir. 2023) (citing *United States v. Wicker*, 848 F.2d 1059, 1061 (10th Cir. 1988)). “Frequently it will be found that the party who requested disclosure has not been prejudiced and that no sanction is needed.” *Charley*, 189 F.3d at 1262 (citation and internal quotations omitted). “To support a finding of prejudice, the court must determine that the delay impacted the defendant’s ability to prepare or present its case.” *United States v. Golyanksy*, 291 F.3d 1245, 1250 (10th Cir. 2002); *see also Charley*, 189 F.3d at 1262. “In considering the feasibility of curing [a defendant’s] prejudice through a continuance, the court should consider whether a continuance will effectively cure the

unfair surprise suffered as a result of the Government's delayed disclosure." *Golyanksky*, 291 F.3d at 1250.

First, to the extent that the United States's did not comply with Rule 16's notice requirements, its non-compliance was not in bad faith. Defendant does not argue that its failure to more thoroughly include its bases and reasons for an opinion was an effort to undermine his defense.

Second, the extent of prejudice to Defendant is small. The Tenth Circuit previously concluded that a defendant did not "suffer[] any prejudice as a result of the government's failure to provide Rule 16 summaries for its witnesses who admittedly gave expert testimony" because the defendant "knew well in advance of trial who was going to testify and the nature and purpose of the expected testimony." *See Charley*, 189 F.3d at 1262. This is different from a case where the government provides no notice at all that a person will be testifying at trial. *Compare United States v. Moya*, 748 F. App'x 819, 824 (10th Cir. 2018) (unpublished) (finding prejudice because the defendant had no notice that the expert would testify for the government), *with Charley*, 189 F.3d at 1261–62 (finding no prejudice because, while the government did not comply with Rule 16's expert disclosure requirements, it included the expert on its witness list in advance). Moreover, the *Daubert* hearing cured any defect and otherwise supplemented the disclosure; Macmanus testified at length how he analyzed the data and generated reports and otherwise explained the bases and reasons for his opinions. After Macmanus's testimony at the *Daubert* hearing, Defendant had all that he needed to assess Macmanus's expert testimony for relevance and reliability. Finally, the *Daubert* hearing occurred nearly two weeks before trial is scheduled to begin, which gives Defendant ample time to prepare its cross-examination.

Third, as the Court explained in an earlier opinion, a continuance would have little utility at this stage. *See* Doc. 184 at 9–10. And even if a continuance was a feasible way to cure the prejudice caused by the United States’s deficient disclosure, Defendant only moved the Court to exclude the testimony entirely. *See* Doc. 79 at 9.

In conclusion, the Court finds that the United States’s expert notice for Special Agent Macmanus was not deficient because it both included a “complete statement of all opinions that the government will elicit from the witness in its case-in-chief . . . or during its rebuttal to counter testimony that the defendant has timely disclosed” and “the bases and reasons for [the opinions].” Fed. R. Crim. P. 16(a)(1)(G)(iii). And even if the notice was deficient, the Court finds that excluding Macmanus’s expert testimony from trial entirely is an improper remedy under the circumstances. *See Walker*, 85 F.4th at 985.

B. Forensic Examiner Jerrilyn Conway

Forensic Examiner Jerrilyn Conway is the United States’s DNA and serology expert. Defendant objects to Conway’s testimony only on the ground that it is not relevant. Doc. 186, 105:13–107:4 (Court: “And just to clarify . . . your only objection is to relevance?” Defense: “Yes, Your Honor.”); Doc. 96 at 5. Specifically, Defendant argues that the testimony regarding Items 50 (two right hand fingernail swabs from Buck Romero), 53 (left hand fingernail clippings from Defendant), 54 (right hand fingernail clippings from Defendant), 56 (left hand fingernail swab from Defendant), and 57 (right hand fingernail swab from Defendant) are irrelevant because Conway cannot conclude with a high degree of likelihood whose blood is on the item being tested. Doc. 186, 106:1–106:10; Doc. 96 at 5 (“Given that the victims appear to have been beaten to death, the lack of any blood DNA on the Defendant or Defendant’s DNA on the victims shows that this

evidence is irrelevant and is not helpful to the jury”).⁶ The Court finds that Conway’s testimony is relevant under Rule 702, and therefore, Defendant’s objection is overruled.

Conway’s expert testimony is helpful to the trier of fact. *See Rice*, 52 F.3d at 847; *Werth*, 950 F.2d at 648. Conway’s testimony pertains to the DNA testing and analysis of blood samples. Doc. 186, 12:21–12:24. Through her testing, Conway can “detect differences in DNA between people” by looking for “short tandem repeats,” or STRs. Doc. 186, 14:8–14:18. DNA analysis also requires a deep understanding of statistics, including likelihood ratios. *See* Doc. 186, 30:5–31:5. And all of this requires considerable training: Conway has an advanced degree in Molecular Biology, has received months of training, has passed a series of examinations, and is a member of a nationally accredited FBI lab. Doc. 186, 8:9–12:4. The Court need not go into painstaking detail to conclude that an untrained layperson would be unable to understand the intricacies of DNA testing and analysis of blood samples “without specialized knowledge concerning the subject.” *See McDonald*, 933 F.2d at 1522; *Rodriguez-Felix*, 450 F.3d at 1123.

Conway’s expert testimony regarding the above-listed items is also relevant in the traditional sense because the testimony has some “tendency to make a fact more or less probable than it would be without the evidence.” Fed. R. Evid. 401(a). Conway will testify about Item 56 that it is “twelve times more likely [that] Gonzales and Buck Romero are contributors, rather than if Gonzales and an unknown individual are contributors[,]” which “provides limited support for the inclusion of Buck Romero to that sample; and the results are “73 times more likely [that] Gonzales and Antonio Romero are contributors, rather than if Gonzales and an unknown individual are contributors[,]” which “provides also limited support for the inconclusion of Antonio Romero

⁶ Defendant’s argument in support of his relevance objection suggests that he only objects to the items included in this list, not to the other items Conway analyzed and will testify about. *See* Doc. 63 at 2–3 (Items 5, 21, 24, 25, 29, 30–34, and 61–64).

to that sample.” Doc. 186, 28:20–30–4. Conway’s DNA analysis of Item 57 resulted in similar findings: Conway will testify that it is 57 times more likely that Defendant and either Buck or Antonio Romero were contributors than Defendant and an unknown person being contributors, and again concluded that there is limited support for inclusion that either one of the victims are secondary contributors to the DNA on the item. *See* Doc. 63 at 5. While Conway concludes that there is only limited support for inclusion, her findings are, at a minimum, probative of whether either victim’s DNA was on Defendant. And this reasoning cuts the other way, too: Conway’s analysis of Item 50 resulted in Defendant being excluded from the sample as a potential contributor. Doc. 186, 27:5–27:19; Ex. 1 at 4. This makes the same fact *less* probable than it would be without the testimony.

Even items resulting in inconclusive results are relevant. If Conway’s testimony is excluded, the jury “would have heard that DNA evidence was recovered from [Items 53 and 54], that it was tested by an analyst, but they would not have heard the results.” *See United States v. Baylor*, 537 F. App’x. 149, 162 (4th Cir. 2013) (per curiam) (unpublished) (holding that a DNA expert’s inconclusive findings were relevant because “[t]o exclude [the expert’s] testimony would have permitted a false inference by the jury [“that [the defendant] could be eliminated as a contributor to the minor DNA mixture”] and led to the confusion that Rule 702 is meant to prevent”). “The natural inference would be that [Defendant] could be eliminated as a contributor to the . . . DNA mixture, which [is] not accurate.” *Id.* In short, this testimony still “has [some] tendency to make a fact more or less probable than it would be without the evidence.” *See United States v. Mariano*, 636 F. App’x. 532, 537–38 (11th Cir. 2016) (unpublished) (permitting inconclusive DNA evidence because the evidence was relevant in that it made it “more or less probable” that the defendant possessed the item and therefore satisfied the “assists the trier of fact”

requirement); *United States v. Ford*, 481 F.3d 215, 219–20 (3d Cir. 2007) (“[The expert’s] testimony that [the defendant’s] shoes could not be ruled out as the source of the prints satisfies the basic relevancy standard in Federal Rule of Evidence 401, as it makes a fact of consequence more probable or less probable than it would be without the evidence.”).

C. Forensic Examiner Shannon Prince

Forensic Examiner Shannon Prince is the United States’s fingerprints expert. Defendant objects to Prince’s testimony only on the ground that it is not relevant because her only conclusion is that “no prints were deemed suitable for comparison.” Doc. 66 at 2–3; Doc. 96 at 5–6; Doc. 186, 109:7–109:13. The Court finds that Prince’s testimony is relevant under Rule 702, and therefore, Defendant’s objection is overruled.

Prince’s testimony is helpful to the trier of fact because her testimony regarding her analysis of fingerprint evidence is not “within the juror’s common knowledge and experience.” *Rodriguez-Felix*, 450 F.3d at 1123; *see also United States v. Baines*, 573 F.3d 979, 989–90 (10th Cir. 2009). A forensic examiner in this area receives substantial training and requires continuing certifications; Prince completed a 20-month training program at the FBI laboratory. Doc. 186, 56:21–57:7. To examine evidence for latent prints, Prince uses “a variety of chemicals, powders, and light sources.” Doc. 186, 57:18–58:3. Fingerprint analysis requires an examiner to first determine whether a print is suitable for analysis, which in turn requires an understanding of what is required to compare sets of prints. *See* Doc. 186, 67:21–69:18. In sum, while an untrained lay person may be able to look at pictures of prints and point out various similarities and dissimilarities, it is beyond a juror’s common knowledge to detect latent prints, determine whether it has the characteristics making it suitable for analysis, and analyze them with scientific rigor.

Moreover, as discussed *supra* section II.B, expert testimony about inconclusive test results is still relevant. Prince’s testimony, despite her conclusion that “no prints were deemed suitable for comparison,” Doc. 66 at 2–3, is relevant because it helps the jury understand that the fingerprints *may or may not* be Defendant’s. *See* Doc. 116 at 8 (arguing that Prince’s testimony “has some tendency of explaining how the perpetrator could not be identified through photographs of the prints on the vehicle”). The jury may hear evidence that fingerprints were recovered from various sites, and if the Court were to exclude Prince’s testimony, the jury may erroneously infer that, because the prints were not tied directly to Defendant (or another relevant person), it must be someone else’s prints. *See Baylor*, 537 F. App’x. at 162 (“To exclude [the expert’s testimony] would have permitted a false inference by the jury and led to the confusion that Rule 702 is meant to prevent.”); *Mariano*, 636 F. App’x. at 537–38. The Court therefore finds that Prince’s testimony has at least some “tendency to make a fact more or less probable than it would be without the evidence.” *See* Fed. R. Evid. 401(a); *Ford*, 481 F.3d at 219–20.

D. Forensic Examiner Brian McVicker

Forensic Examiner Brian McVicker is the United States’s footprints expert. Defendant objects to McVicker’s testimony on the grounds that it is not relevant and is highly prejudicial, Doc. 96 at 6, and that his footprint analysis methodology is not reliable, Doc. 186 at 112:7–114:11. The Court finds that McVicker’s testimony is relevant, not unfairly prejudicial, and reliable under Rule 702, and therefore, Defendant’s objections are overruled.

Relevance. Defendant argues that McVicker’s testimony is irrelevant because he determined that, because “there is limited detail and clarity retained in the footwear impressions on the scene, no determination could be reached as to whether either [Items 59 or 60] could or

could not have made [the] impressions.” Doc. 61 at 3–8; Doc. 96 at 6.⁷ The Court rejects this argument and finds that this portion of testimony is relevant and helpful to the trier of fact under Rule 702.

McVicker’s testimony is helpful to the trier of fact because his testimony is not “within the juror’s common knowledge and experience.” *Rodriguez-Felix*, 450 F.3d at 1123; *see also United States v. Allen*, 390 F.3d 944, 949–50 (7th Cir. 2004) (rejecting the argument that “a layperson could have performed the visual comparison of [the defendant’s] shoe and the impression” and concluding that a footprints expert’s testimony was relevant because footprint analysis requires specialized training and knowledge); *Ford*, 481 F.3d at 218 (concluding that the district court “properly found that the expert shoeprint testimony was based on valid specialized knowledge and would aid the jury in making comparisons between the soles of shoes found on or with the defendant and the imprints of soles found on surfaces at the crime scene”); *United States v. Rose*, 731 F.2d 1337, 1346 (8th Cir. 1984) (concluding that a footprints expert’s testimony, which “compared class characteristics of size, shape, and design,” assisted the jury by “provid[ing] a method for comparing the test print and the shoeprint impression lifted from the counter”). Footwear analysis requires adherence to rigorous standards to maintain quality and reliable results. Doc. 186, 78:22–80:11. As discussed above, while an untrained lay person may be able to look at pictures of prints and point out various similarities and dissimilarities, it is beyond a juror’s common knowledge to determine whether prints have the characteristics making it suitable for analysis and analyze them with any scientific rigor.

⁷ Defendant objection does not specifically refer to McVicker’s testimony that “[t]he photographed footwear impressions do not correspond in outsole design with [Items 44, 45, 77, and 78],” and that “these [Items] were excluded as the source of [the] impressions.” Doc. 61 at 8–10. The Court finds that this testimony is plainly relevant because it could be used to explain, among other things, how the victims arrived at the place where the bodies were discovered.

And again, expert testimony about inconclusive test results is still relevant. *See supra* sections II.B, C. McVicker’s testimony, despite his conclusion that “no determination could be reached as to whether either [Items 59 or 60] could or could not have made [the] impressions,” Doc. 61 at 3–8, is relevant because it helps the jury understand that Defendant *may or may not* have caused the footprint impressions. The jury may see evidence of footprint impressions at various sites, and if the Court were to exclude McVicker’s testimony, the jury could erroneously infer that, because no footprint analysis was given, the footprint impressions were caused by someone other than Defendant. *See Baylor*, 537 F. App’x. at 162; *Mariano*, 636 F. App’x. at 537–38. The Court therefore finds that McVicker’s testimony has at least some “tendency to make a fact more or less probable than it would be without the evidence.” *See* Fed. R. Evid. 401(a); *Ford*, 481 F.3d at 219–20.

Reliability. The Court finds that McVicker’s expert testimony “is the product of reliable principles and methods” and his “opinion reflects a reliable application of the principles and methods to the facts of the case.” *See* Fed. R. Evid. 702(c), (d). To reiterate, McVicker makes two determinations in this case: first, while he observed that the “footwear impressions contain a similar pattern of nested diamonds to the outsole design on both of Defendant’s shoes” and “the footwear impression in the groove in [Items 59 and 60] heel is similar in appearance to Impression 6C,” he concludes that “no determination could be reached as to whether either [Items 59 or 60] could or could not have made [the questioned] impressions,” Doc. 61 at 3; second, he concludes that Items 44, 45, 77, and 78 can be “excluded as the source of [the photographed footwear impressions]” because the photographed footwear impressions “do not correspond in outsole design with [Items 44, 45, 77, or 78],” Doc. 61 at 8–9. Defendant primarily argues that McVicker’s testimony that the footwear impressions contain a “similar” pattern to the design on the soles of

Defendant's shoes, Doc. 61 at 3, is unreliable and does not withstand scrutiny under *Daubert* because there is "no way of qualifying what ["similar"] means" and it is "untethered from any type of benchmark or control." Doc. 186, 112:7–114:11.⁸

A particular similarity between an impression and a shoe (such as a "nested diamond" pattern) is known as a "class characteristic." Doc. 186, 99:23–100:9. A class characteristic is defined simply as "a feature that is shared by two or more footwear items." Doc. 61, Ex. 1 at 9 (lab report).⁹ To determine whether an impression and footwear item share one or more class characteristics, the examiner first "conducts an initial assessment of the submitted footwear . . . evidence" to decide "whether the questioned item contains sufficient detail to enable a comparison with known footwear and a make, model determination using the laboratory reference materials." Doc. 61-1 at 5. If the examiner is satisfied with his initial assessment, he then "process[es] the evidence using physical, chemical, or digital methods and utilize[s] specialized lighting/photography techniques to enhance features for the benefit of the examinations." Doc. 61-1 at 5. Then, the examiner conducts a "comparison," which is a "visual examination of the evidence" where "the examiner compares the features observed in the questioned impression to those on the outsole (of the known footwear item) . . . using side-by-side comparison, superimposition, or both." Doc. 61-1 at 5. To determine whether "the known item either is or is not the source of the questioned impression," the examiner "evaluates the correspondence of features in . . . design, physical size, wear, and randomly acquired characteristics." Doc. 61-1 at 5.

⁸ Defendant raised this argument for the first time at the *Daubert* hearing. See Doc. 96 at 6. As a result, the Court has only Defendant's brief argument at the hearing (which lacks citations to any case law) to ascertain his specific objections. The Court interprets Defendant's oral argument as an objection only to McVicker's testimony regarding similarities between the photographed impressions and Items 59 and 60. See Doc. 186, 112:7–114:11.

⁹ McVicker's lab report, referred to in this opinion as Doc. 61-1, was admitted at the *Daubert* hearing as United States Ex. 10.

The comparison step is where the examiner identifies shared class characteristics between the impression and the footwear item.

Footprint analysis, like fingerprint analysis, is “best described as an area of technical rather than scientific knowledge.” *See Baines*, 573 F.3d at 990. The Court finds that the comparison technique, or the comparison between the sole of a known item and a photographed impression, “can be and has been tested.” *Id.* McVicker completed rigorous training programs in footwear and tire evidence, Doc. 186, 76:13–76:24, which presumably includes proficiency tests. *See Baines*, 573 F.3d at 990. This method is also testable in the sense that another examiner can look at the same photographs to determine whether the first examiner’s observations about certain class characteristics are correct. Doc. 186, 88:20–89:19. The testability of the comparison process is further supported by McVicker’s notetaking practices; he marks and notates the prepared photographs so other examiners can see exactly what he was looking at. *See* Doc. 61 at 4–8. It is also important to note that the method need not be 100 per cent accurate; the issue is “whether a method can be ‘assessed for reliability,’ not whether it always gets it right.” *United States v. Gissantaner*, 990 F.3d 457, 464 (6th Cir. 2021) (citing Advisory Comm. Note to 2000 Amend., Fed. R. Evid. 702). This factor supports the United States.

FBI footwear analysis also has and maintains “standards controlling the technique’s operation.” *Baines*, 573 F.3d at 991. As discussed above, before an examiner can reach the comparison stage, he must first conduct an initial assessment and satisfy the requirements of the preparation stage; each stage of the examiner’s analysis is standardized. Doc. 61-1 at 5–8. While the identification of similarities is subjective, the initial assessment and preparation steps adequately ensure that the photographed impression is capable of being reliably examined for

similarities. But because of the subjectivity associated with this analysis (as is common with other non-scientific disciplines), this factor tilts only slightly in the United States's favor.

This method of footwear analysis, and the use of class characteristics, is “generally accepted” in the field of law enforcement. *See Baines*, 573 F.3d at 991 (“[W]hile we acknowledge that acceptance by a community of unbiased experts would carry greater weight, we believe that acceptance by other experts in the field should also be considered.”). The footwear analysis methodology used by McVicker has been practiced in the FBI Lab for nearly a century, and the Lab continues to publish articles and hold conferences to refine its practices. *See* Doc. 186, 92:9–92:23. This factor strongly supports the United States.

The footwear analysis process has been subject to peer review and publication. *See Baines*, 573 F.3d at 990. The FBI Lab has performed studies on the discipline and journal articles are published. Doc. 186, 92:9–92:21. McVicker's findings also undergo a peer review process by another qualified footwear examiner. Doc. 186, 79:24–80:11. Defendant offers no argument, and provides no evidence, against this factor. Because the United States did not present the Court with any of the studies or journal articles referred to, the Court finds that this factor goes in the United States's favor only slightly.

The final factor, whether the process has a known error rate, is not cleanly applied to an area of technical knowledge like footprint analysis. To this point, McVicker testified that the rate of error of misattributing certain pattern of design from footwear to impressions has been studied but does not identify any studies identifying the rate of error. Doc. 186, 92:24–93:10. However, as discussed above, the methods preceding the comparison stage are “standards that [examiners] can use to mitigate the risk of error.” *See Gissantaner*, 990 F.3d at 465.

In conclusion, the Court finds that, on balance, the *Daubert* factors support the reliability of the footwear analysis method employed by McVicker to determine whether the photographed impressions and Defendant's shoes share class characteristics. The Court emphasizes just how limited McVicker's testimony regarding similarities between the impressions and Items is. *See generally* Nacchio, 555 F.3d at 1241 ("Reliability questions may concern the expert's . . . application of the method to the data."). And to the extent the jury could give more weight to this testimony than it deserves, cross-examination remains an adequate tool to ensure that the jury has a proper understanding of his conclusions.

Defendant also suggests that McVicker's testimony does not satisfy Rule 702 because it is not based on sufficient facts or data. *See* Doc. 186, 113:23–114:11. Again, the Court disagrees. McVicker's conclusions are quite limited, which reflects the limits of the data available to him (such as having poor quality photos and no scale next to the impressions). To the extent McVicker testifies to similarities between the impressions and Defendant's shoes, *see* Doc. 61 at 3, the Court finds that the photos included in his expert report are "sufficient facts or data" to support this limited observation. *See* Fed. R. Evid. 702(b).

Rule 403. As established above, McVicker's testimony is relevant. The Court further finds that the probative value of McVicker's testimony is not "substantially outweighed by the danger of . . . unfair prejudice." Fed. R. Evid. 403. Defendant argues that parts of McVicker's testimony are "highly prejudicial" because his testimony about similarities between Defendant's seized shoes and the impressions, despite his opinion that no determination could be reached, could cause the jury to speculate that Defendant caused the impressions. *See* Doc. 96 at 6.¹⁰ This argument is

¹⁰ The Court nonetheless expressly addresses Rule 403 despite Defendant neither referencing the Rule (or its language) nor discussing the probative value of the testimony.

unconvincing. McVicker's conclusion is extremely limited: He makes clear that he could not determine "whether either [of Defendant's seized shoes] could or could not have made [the] impression." Doc. 61 at 3–8. If Defendant does not think McVicker's testimony is clear enough on this point, he can ask for further clarification on cross-examination. In short, the Court finds that the prejudice from this statement (if any) is minimal and does not *substantially* outweigh its probative value. *See, e.g., United States v. Allen*, 610 F. App'x 773, 777–78 (10th Cir. 2015) (unpublished) (concluding that the prejudice from an expert's testimony "that the results of her DNA tests were inconclusive" did not substantially outweigh its probative value because, "[w]hile the probative value of this evidence was minimal at best, the danger of unfair prejudice against [the defendant] was even more slight").

CONCLUSION

Accordingly, the Court denies Defendant's motions to exclude expert witnesses, Docs. 79, 96. The Court denies as moot Defendant's motion to exclude Karen Lowe, Doc. 115.

It is SO ORDERED.

/S/
KEA W. RIGGS
UNITED STATES DISTRICT JUDGE